

#### ASTHMA MANAGEMENT MADE EASY

The measure of Fractional Exhaled Nitric Oxide is an effective way of measuring airway inflammation.

#### FENO MEASUREMENT IS

- Accurate
- Reproducible
- Immediate
- As informative as biopsy

#### FENO MEASUREMENT OFFERS:

- Correct asthma diagnosis
- Rapid identification of non-compliance to medication
- Insights into steroid effectiveness
- Prediction of steroid response
- Steroid dose-titration that reduces cost and improves patient outcome
- Notification of loss of control
- Prediction of asthma relapse



We can diagnose and treat any respiratory or sleep disorder. Ask your doctor for a referral.

All Enquiries and Bookings Ph (07) 3870 0858 Fax (07) 3870 2608 Email: lung@tsgq.com.au Web: www.thoracicandsleep.com.au

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# People caring for how you **breathe** and **sleep**.



Andrew personally assisted me with problems I faced during my International Cricket career a few years ago. Under Andrew's care, my health turned around within a week which eventually led me back to reselection on the Australia team. As a professional athlete, your team of trusted advisors is everything, so I in turn have no hesitation in

recommending Dr Andrew Scott, his colleagues and their own support team to those who are seeking first class care and attention in their specialised field.

#### MATTHEW HAYDEN, AM

FORMER AUSTRALIAN CRICKETER, IPL PLAYER AND HOST OF 'MATTHEW HAYDEN'S HOME GROUND'

#### www.thoracicandsleep.com.au

### Asthma and FeNO

Asthma Management Made Easy for both doctor and patient through Fractional Exhaled Nitric Oxide (FeNO measurement).



For more information on Asthma or other respiratory disorders, visit our website

www.thoracicandsleep.com.au



#### WHAT IS FENO?

FeNO stands for Fraction of exhaled Nitric Oxide and is a non-invasive measure of airway inflammation. FeNO can be increased in proportion to increased bronchial wall inflammation, induced sputum eosinophilia and also airway hyper responsiveness.

Generally, an increase in FeNO represents a loss of asthma control. FeNO levels are generally decreased by controlling asthma – through use of inhaled corticosteroids (ICS) and sometimes in combination of ICS and removal of asthma triggers.

Being able to monitor this airway inflammation and the patient's response to medication is considered the gold standard in the management of respiratory diseases.

#### WHY NITRIC OXIDE?

Nitric Oxide (NO) is produced in the epithelial cells of the bronchial wall, as part of the inflammatory process. NO production has been shown to increase when there is eosinophilic airway inflammation.

The presence of Nitric Oxide in exhaled air of humans and animals was first described in 1991. Since then, well over 1000 papers have been published in the field and knowledge of how this can assist in asthma diagnosis and management continues to improve.

FeNO is now indicated in asthma diagnosis, management, medication adherence and to predict upcoming asthma exacerbations.

#### HOW DOES FENO WORK?

The Fraction of Exhaled Nitric Oxide test is easy to perform and generally accepted by all patients. The patient breathes out at a constant flow rate of 50mL/ sec and their breath is analysed by an electrochemical sensor.

#### STEROID DOSE TITRATION

FeNO acts as an excellent tool for titrating steroid dose. This aims at maintaining asthma control at the smallest dose necessary which in turn reduces side-effects and costs of steroid use. Some patients are hesitant to take ICS, especially when they have no symptoms.

FeNO provides an easy assessment that can provide the patient and doctor with the ability to prescribe the correct dose, and show the patient tangible effects of not using their ICS.



### HOW CAN FENO ASSIST IN ASTHMA MANAGEMENT?

#### CORRECT ASTHMA DIAGNOSIS:

An exhaled Nitric Oxide level of over 25ppb for adults indicates a moderate level of airway inflammation – consistent with asthma. When used in conjunction with spirometry and bronchodilator reversibility this provides an excellent tool for asthma confirmation.

## IDENTIFICATION OF PATIENT NON-COMPLIANCE:

Exhaled Nitric Oxide levels are reduced with antiinflammatory treatment. In clinical practice, elevated levels of Nitric Oxide in patients taking maintenance ICS indicates non-compliance or poor inhalation technique. A review of technique, compliance and dose is indicated – with a follow up check to see if FeNO levels have decreased.

## NOTIFICATION OF LOSS OF CONTROL:

Monitoring a patient's exhaled Nitric Oxide level can provide excellent information regarding asthma control. If a patient's FeNO level increases by 60% from one visit to the next there is an 80% positive predictive value of an imminent deterioration of asthma control.